



View south from Mt. Tenandra.

ABORIGINAL DUE DILIGENCE & HISTORIC HERITAGE ASSESSMENT REPORT

RALSTON QUARRY

MT. TENANDRA

DECEMBER 2019

Report prepared by
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for Groundworks Plus

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Acknowledgement

OzArk acknowledge Traditional Owners of the area on which this assessment took place and pay respect to their beliefs, cultural heritage and continuing connection with the land. We also acknowledge and pay respect to the post-contact experiences of Aboriginal people with attachment to the area and to the elders, past and present, as the next generation of role models and vessels for memories, traditions, culture and hopes of local Aboriginal people.

EXECUTIVE SUMMARY

OzArk Environment & Heritage (OzArk) has been engaged by Groundwork Plus (the client), on behalf of Quarry Solutions Ltd. (the proponent) to complete a heritage assessment for the proposed Ralston hard rock quarry (the proposal). This report assesses both Aboriginal cultural heritage values and historic heritage values that may be impacted by the proposal. The proposal is in the Coonamble Local Government Area (LGA)

The Ralston hard rock quarry (the Quarry) will be completed in two stages:

- Stage 1–2.3 million tonnes over five years at 490 000 tpa (tonnes per annum) (operated by the proponent)
- Stage 2–2.2 million tonnes over 20 years at 100,000 tpa (operated by landowner).

A search of the Aboriginal Heritage Information Management System (AHIMS) database identified 103 previously recorded Aboriginal sites in a 25 km x 25 km area centred on the study area with the closest of these occurring 1.8 km to the north near to Tenandra Creek. None of these sites are at risk of impact by the proposal and no previously recorded Aboriginal sites are recorded within the study area.

The visual inspection of the study area was undertaken by OzArk archaeologist, Kirwan Williams, on Thursday 24 October 2019. The visual inspection identified that the majority of the study area has been subject to extensive modification including vegetation clearance and earthworks. Other disturbance factors relate to the use of the area for the production of wheat and pastoral purposes.

Aboriginal heritage

One site was recorded as a result of the inspection: Mt. Tenandra OS1.

Appropriate management of cultural heritage items is primarily determined based on their assessed significance as well as the likely impacts of the proposed development. The most appropriate management of Mt. Tenandra OS1 would be for the proposal to avoid the site.

As the site is bounded by physical barriers to the east (a drainage line) and west toward the Stage 1 extraction area (vehicle track) the site should be avoided if the management measures below are adopted.

The undertaking of the Due Diligence process resulted in the conclusion that the proposed works will have an impact on the ground surface, however, no Aboriginal objects or intact archaeological deposits will be harmed by the proposal, provided the new site Mt. Tenandra OS1 is avoided as per the recommendations in **Section 5.1**. This moves the proposal to the following outcome:

(Aboriginal Heritage Impact Permit) AHIP application not necessary. Proceed with caution. If any Aboriginal objects are found, stop work and notify the Biodiversity and Conservation Division (BCD) of the Department of Planning, Industry and

Environment (DPIE). If human remains are found, stop work, secure the site and notify NSW Police and BCD.

To ensure the greatest possible protection to the area's Aboriginal cultural heritage values, the following recommendations are made:

- 1) To avoid impact to Mt. Tenandra OS1, the following management should be followed:
 - No activity to the east of the vehicle track and north of 666487E 6542850N GDA94 (Refer to **Figure 3-3**)
 - If the track requires widening it should only be from the western side of the existing track.

The area of significance will be appropriately demarcated. This will include fencing with Hi-vis flagging to alert quarry workers that the area is a sensitive environmental zone.

- 2) If impact is unavoidable to Mt. Tenandra OS1 then approval to disturb sites under the authority of an AHIP must be sought from the BCD and will depend on many factors including the site's assessed significance. Aboriginal community consultation will also need to occur following the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (ACHCRs).
- 3) If Mt. Tenandra OS1 is avoided, the proposed work may proceed within the study without further archaeological investigation under the following conditions:
 - a) All land and ground disturbance activities must be confined to within the study area, as this will eliminate the risk of harm to Aboriginal objects in adjacent landforms. Should the parameters of the proposal extend beyond the assessed areas, then further archaeological assessment may be required.
 - b) All staff and contractors involved in the proposed work should be made aware of the legislative protection requirements for all Aboriginal sites and objects.
- 4) This assessment has concluded that there is a low likelihood that the proposed work will adversely harm Aboriginal cultural heritage items or sites if Mt. Tenandra OS1 is avoided. However, during works, if Aboriginal artefacts or skeletal material are noted, all work should cease and the procedures in the *Unanticipated Finds Protocol* (**Appendix 2**) should be followed;
- 5) Work crews should undergo cultural heritage induction to ensure they recognise Aboriginal artefacts (see **Appendix 3**) and are aware of the legislative protection of Aboriginal objects under the NPW Act and the contents of the *Unanticipated Finds Protocol*.

- 6) The information presented here meets the requirements of the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales*. The report should remain onsite for a period of up to 5 years as it may be used to support a defence against prosecution in the event of unanticipated harm to Aboriginal objects.

Historic heritage

The inspection of the study area confirmed that no items of historic heritage significance exist or are unlikely to exist in the study area.

Despite the fact that it is extremely unlikely that the proposed works will encounter significant historic items, an *Unanticipated Finds Protocol* has been included as **Appendix 4** and this should be followed in the unlikely event that any significant historic objects are noted.

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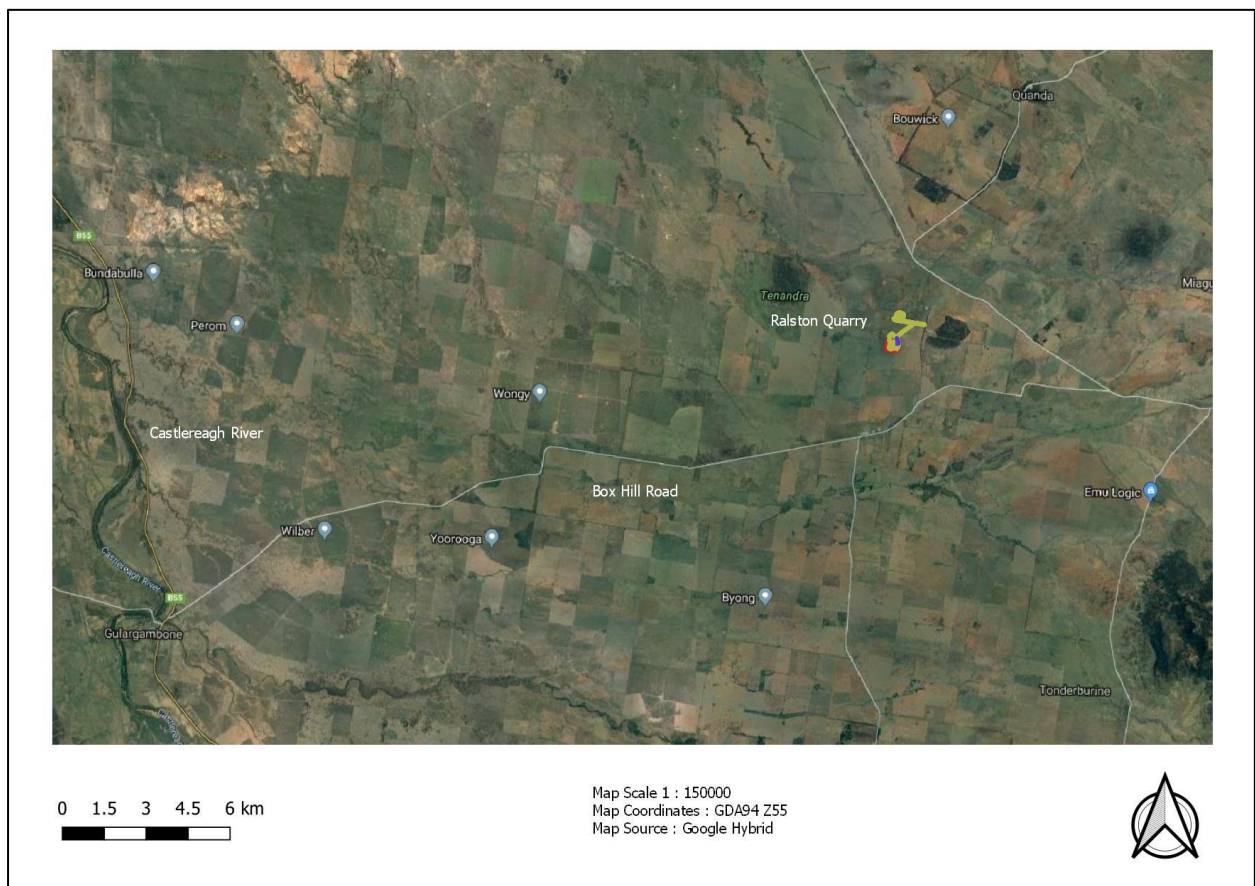
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1 INTRODUCTION

1.1 BRIEF DESCRIPTION OF THE PROPOSAL

OzArk Environment & Heritage (OzArk) has been engaged by Groundwork Plus (the client), on behalf of Quarry Solutions Ltd. (the proponent) to complete a heritage assessment for the proposed Ralston hard rock quarry (the Quarry, the proposal). This report assesses both Aboriginal cultural heritage values and historic heritage values that may be impacted by the proposal. The proposal is in the Coonamble Local Government Area (LGA) (**Figure 1-1**).

Figure 1-1. Map showing the location of the proposal.



1.2 BACKGROUND

The Planning Secretary's Environmental Assessment Requirements (SEARs) have been issued for the proposal and it is noted that they state:

Heritage – including:

- The EIS must identify and describe the Aboriginal cultural heritage values that exist across the whole area that will be affected by the proposal.
- An assessment of the potential impacts on Aboriginal heritage (cultural and archaeological), including evidence of appropriate consultation with relevant Aboriginal communities/parties and documentation of the views of these stakeholders regarding the likely impact of the development on their cultural heritage.

- Identification of historic heritage in the vicinity of the development and an assessment of the likelihood and significance of impacts on heritage items, having regard to the relevant policies and guidelines.

1.3 STUDY AREA

This report will refer to the proposed works in the following areas:

- Southern area: approximately 460 metre (m) x 600 m (Stage 1) - proposed for processing, stockpiling and extraction and located 510 m south of the Stage 2 area (**Plates 1 and 5**).
- Northern area: approximately 500 m x 530 m (Stage 2) - proposed for processing, stockpiling and extraction on the southern slope of Tenandra Hill (**Plates 6 and 10**)
- An access track approximately 790 m long leading to the Stage 1 area and an access track approximately 480 m long leading to the Stage 2 area. Both tracks will extend west from Weenya Road (**Plate 11**).

The study area is shown on **Figure 1-2**.

1.4 ASSESSMENT APPROACH

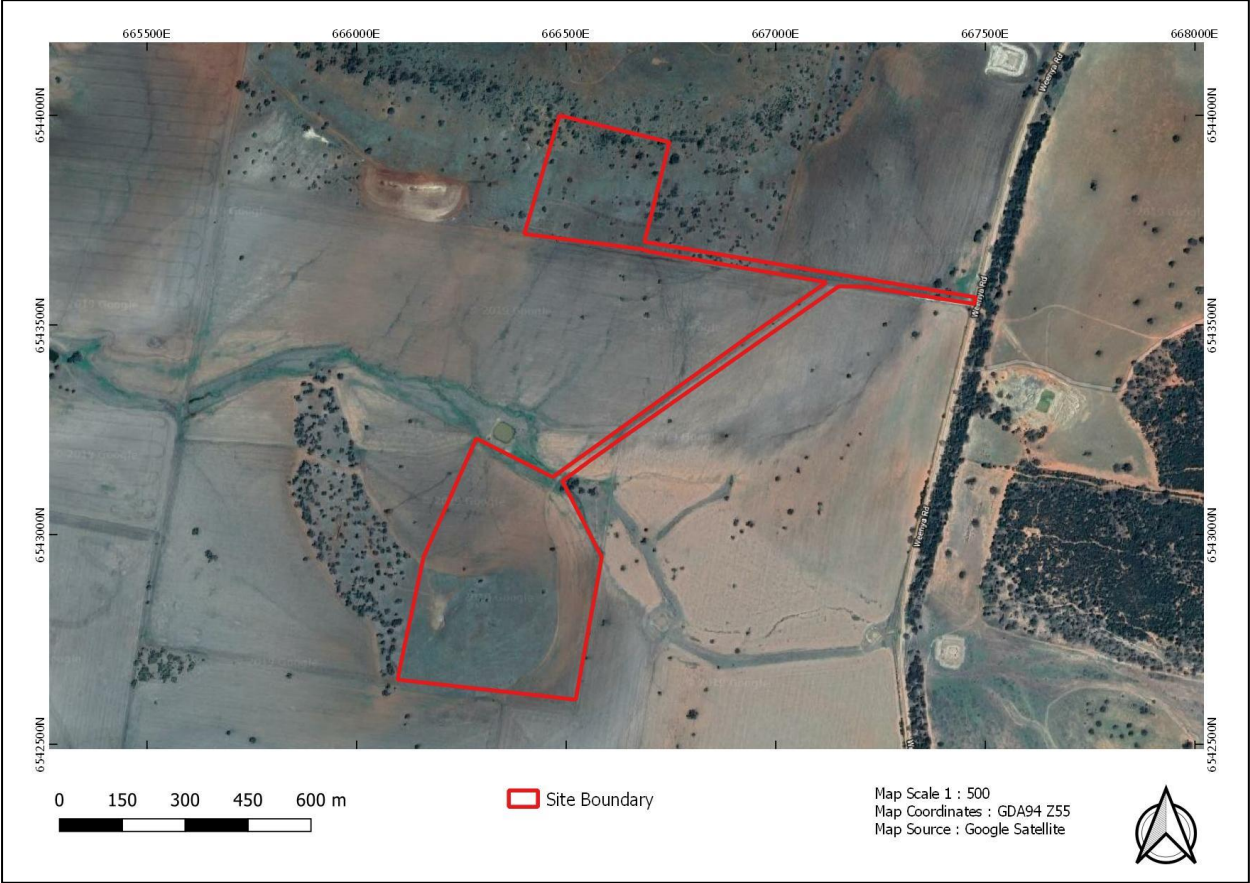
Aboriginal cultural heritage

The desktop and visual inspection component for the study area follows the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* (Due Diligence; DECCW 2010). The field inspection followed the *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in New South Wales* (OEH 2011).

Historic heritage

This assessment applies the Heritage Council's *Historical Archaeology Code of Practice* (Heritage Council 2006) in the completion of a historical heritage assessment, including field investigations.

Figure 1-2: Aerial showing the study area.



2 ABORIGINAL DUE DILIGENCE ASSESSMENT

2.1 INTRODUCTION

The National Parks and Wildlife Regulation 2009 (NPW Regulation) made under the *National Parks and Wildlife Act 1974* (NPW Act) advocates a Due Diligence process to determining likely impacts on Aboriginal objects. Carrying out Due Diligence provides a defence to the offence of harming Aboriginal objects and is an important step in satisfying Aboriginal heritage obligations in NSW.

2.2 DEFENCES UNDER THE NPW REGULATION 2009

2.2.1 Low impact activities

The first step before application of the Due Diligence process itself is to determine whether the proposed activity is a “low impact activity” for which there is a defence in the NPW Regulation. The exemptions are listed in Section 80B (1) of the NPW Regulation (DECCW 2010: 6).

The proposed activities are not considered a ‘low impact activity’ and the Due Diligence process must be applied.

2.2.2 Disturbed lands

Relevant to this process is the assessed levels of previous land-use disturbance.

The NPW Regulation Section 80B (4) (DECCW 2010: 18) define disturbed land as follows:

Land is disturbed if it has been the subject of a human activity that has changed the land’s surface, being changes that remain clear and observable.

Examples include ploughing, construction of rural infrastructure (such as dams and fences), construction of roads, trails and tracks (including fire trails and tracks and walking tracks), clearing vegetation, construction of buildings and the erection of other structures, construction or installation of utilities and other similar services (such as above or below ground electrical infrastructure, water or sewerage pipelines, stormwater drainage and other similar infrastructure) and construction of earthworks.

All sections of the proposed work are in previously cleared landforms which contain evidence of previous vegetation clearance with large parts having been subjected to ploughing and cropping. As such, it could be considered that the proposed work is occurring in ‘disturbed land’ (Error! Reference source not found.). However, apart from these factors, sections of the proposed work are not in an area where the land’s surface has been changed in a clear and observable manner and the Due Diligence process must be applied.

In summary, it is determined that the proposal must be assessed under the Due Diligence Code. The reasoning for this determination is set out in **Table 2-1**.

Table 2-1: Determination of whether Due Diligence Code applies.

Item	Reasoning	Answer
Is the activity a Part 3A project declared under section 75B of the EP&A Act?	The proposal is assessed under Part 4 of the EP&A Act.	Yes
Is the activity exempt from the NPW Act or NPW Regulation?	The proposal is not exempt under this Act or Regulation.	No
Will the activity involve harm that is trivial or negligible?	The activity will not involve harm that is trivial or negligible.	No
Do either or both of these apply: Is the activity in an Aboriginal place? Have previous investigations that meet the requirements of this Code identified Aboriginal objects?	The activity will not occur in an Aboriginal place. No previous investigations have been conducted.	No
Is the activity a low impact one for which there is a defence in the NPW Regulation?	The proposal is not a low impact activity for which there is a defence in the NPW Regulation.	No
Do you want to use an industry-specific code of practice, adopted by the NPW Regulation or other Due Diligence process?	No	No
The Due Diligence Code of Practice applies		

2.3 APPLICATION OF THE DUE DILIGENCE CODE OF PRACTICE TO THE PROPOSAL

To follow the generic Due Diligence process, a series of steps in a question/answer flowchart format (DECCW 2010: 10) are applied to the proposed impacts and the study area, and the responses documented.

2.3.1 Step 1

Will the activity disturb the ground surface or any culturally modified trees?

Yes, the proposal will impact the ground surface but will not impact culturally modified trees.

There are very few trees remaining and what trees there are consist of immature regrowth therefore it is not possible for culturally modified trees to be impacted by the proposal. The proposed works will include the following ground disturbances:

- The excavation of soil to expose the bedrock as part of the extraction process
- Areas to be used to stockpile processed material
- Tracks for mobile plant to access the area
- All ground disturbance works, however, will occur within areas previously disturbed during the initial vegetation clearance, its use for pastoral purposes and cultivation of crops.

2.3.2 Step 2a

Are there any relevant confirmed site records or other associated landscape feature information on AHIMS?

No, there are no previously recorded sites within the study area.

A search of the AHIMS database was completed on 21 October 2019. The search encompassed a 25 kilometre (km) x 25 km area, centred on the study area (GDA Zone 55, Easting: 641500–691500; Northing: 6518500–6568500; refer to **Appendix 1**). The search returned 103 Aboriginal sites and no Aboriginal Places.

Figure 2-1 shows all previously recorded sites in relation to the study area and **Table 2-2** shows the types of sites that are close to the study area.

Table 2-2: Site types and frequencies of AHIMS sites near the study area.

Site Type	Number	% Frequency
Modified Tree (MT)	37	35.9
Artefact Scatter (AS)	17	16.5
Open Site (OS)	14	13.6
Isolated Find (IF)	5	4.8
Potential Archaeological Deposit (PAD)	4	3.9
Aboriginal Resource and Gathering (ARG)	3	2.9
Aboriginal Ceremony and Dreaming	3	2.9
Rock Shelter with Deposit (RSD)	3	2.9
Burial (B)	2	1.9
Habitation Structure with Artefact Scatter	2	1.9
Grinding Groove (GG)	2	1.9
AS, PAD	2	1.9
ARG, AS, PAD	1	1
ARG, MT	1	1
ARG, AS	1	1
Habitation Structure with Isolated Find	1	1
GG, IF	1	1
Waterhole	1	1
MT, OS	1	1
MT, B	1	1
GG, RSD	1	1

Figure 2-1: The nearest recorded sites in proximity to the study area.

The closest known Aboriginal sites to the study area are: AHIMS #28-1-0052 (Gulargambone Road ST1) and AHIMS #28-1-0062/0063/0064 (Box Ridge ST1 – 3) all modified trees lying within the road corridor of Gulargambone Road 4.1 km southwest and 4.4 km southeast of the study area. The closest sites to the north of the study area are a group of 18 sites clustered around Tenandra Creek and on the far side of Tenandra Hill from the study area. These sites consist of artefact scatters (2), artefact scatters with potential archaeological deposit (PAD) (1), isolated finds (4), Aboriginal ceremony and dreaming (2), modified trees (7), Aboriginal resource and gathering with artefact scatter (1) and Aboriginal resource and gathering and modified tree (1). These sites are all located between 1.6 km and 2.5 km to the north of and outside of the study area.

2.3.3 Step 2b

Are there any other sources of information of which a person is already aware?

No, there are no other sources of information that would indicate the presence of Aboriginal objects in the study area.

Prior to 1980 little or no systematic archaeological studies had been undertaken in the central west region (Haglund 1984). In the interim, a number of archaeological studies have been

conducted, providing baseline data for placing past Aboriginal sites within a regional landscape context (e.g. Balme 1986; Pearson 1981; Purcell 2000).

Pearson (1981) worked primarily in the Upper Macquarie region; nevertheless, the proximity of the Upper Macquarie (approximately 100 km to the west) to the study area render the findings relevant. Pearson divided the recorded archaeological sites into two main categories: occupation sites and non-occupation sites (including grinding grooves, scarred or carved trees, ceremonial and burial sites). Analysis of site locations produced a site prediction model with occupation occurring in areas with: access to water, good drainage, level ground, adequate fuel and appropriate localised weather patterns for summer or winter occupation. Occupation sites were most frequently located on low ridge tops, creek banks, gently undulating hills and river flats and usually in open woodland vegetation (Pearson 1981: 101). The location of non-occupation sites was dependent upon a variety of factors relating to site function. For instance, grinding grooves were found where appropriate outcropping sandstone occurred close to occupation sites. The location of scarred trees displayed no obvious patterning, other than proximity to watercourses. Pearson suggested that these patterns would differ on the drier plains to the west, towards Dubbo and beyond, where dependence upon larger, more permanent water supplies was greater.

The North-Central Rivers study undertaken by Balme (1986) examined site location in terms of site preservation. Balme (1986: 182) found that, other than historic impacts, site distribution was most affected by geomorphic processes affecting site preservation and leading to site exposure. There was little scope for the assessment of site chronologies as few datable contexts had been located. Balme concluded that sites recorded on AHIMS from ethnographic accounts were unlikely to be located in the current landscape. Balme (1986) reported that, of the 200 carved trees reported in the area, only five remained *in situ* at the time of the study; 50 are known to be in museum and private collections, and the whereabouts of the remainder are unknown, with many suspected to be in private collections.

In an assessment of the nearby Pilliga and Goonoo State Forests, Purcell (2000, 2002) recorded 47 and 106 Aboriginal sites respectively. Purcell (2000: 31) found that sites were more frequently located within alluvium landforms including creeks, swamps and chains of ponds surrounded by floodplains and terraces, and that 91.5 per cent of sites were recorded within 200 m to 300 m of water.

OzArk (2016) was engaged by the Central West Local Land Services (CWLLS) to formulate and test a predictive model for Aboriginal site location within Travelling Stock Reserves (TSRs) across the CWLLS area. In formulating a predictive model for site location, Mitchell (2002) landscapes were used to understand the underlying landform type. The resolution of the Mitchell landscape units was too fine to be of use and OzArk (2016) used a higher-level classification within the Mitchell landscape units to describe the landscapes within the CWLLS area. Landscapes were divided into the following types:

- Channels and floodplains
- Alluvial plains
- Slopes
- Uplands
- Downs.

Previously recorded AHIMS sites were plotted against these landscape types and the following observations made:

- A high number of sites (n=876) were located on slopes. This result could be due to the fact that Dubbo is located within a slopes landscape and the highest number of sites in the CWLLS area is recorded in and around Dubbo
- The highest density of sites is within channels and floodplains landscapes (n=927)
- Alluvial plains landscapes have the third highest density of sites (n=770)
- Relatively small numbers of sites are recorded in uplands (n=5) and plateau (n=34) landscapes
- A moderate number of sites are recorded in downs landscapes (n=255). Three or four clusters of sites exist in downs landscapes, which may have skewed the data. If the veracity of all site recordings in this category could be verified, it is suspected that the actual number of sites in downs landscapes would be lower.

OzArk (2016) divided the CWLLS area into two stream orders—major watercourses (normally named rivers) and minor watercourses (normally named creeks and their larger tributaries)—and buffers were established for each watercourse type as follows:

- Drainage 1 buffer: 200m either side of a major watercourse
- Drainage 2 buffer: 100m either side of a minor watercourse.

As such, the OzArk (2016) CWLLS predictive model made predictions based on the landscape type and distance to watercourses. The predictive model was tested by assessing 32 TSRs within the CWLLS area located in a variety of landscape types with variable distances to water. As a result of the assessment, 59 sites were recorded. Twenty six (44%) of the recorded sites were modified trees, 22 (37%) were artefact scatters and 11 (19%) were isolated finds. The majority of recorded sites were located in channels and floodplains landscapes (35 sites or 59% of all sites), followed by 10 in slopes landscapes, four in alluvial plains landscapes and one in a downs landscape. No sites were recorded in uplands or plateau landscapes.

Table 2-3 demonstrates that the most archaeologically sensitive landscape in the CWLLS area is channels and floodplains, followed by slopes landscapes. Other landscape types have a low representation but demonstrate that low densities of sites exist in other landscape types.

Table 2-3: Association of all recorded sites to landscape units (OzArk 2016).

Landscape unit	Number of sites	Percentage of total (n=59)
Channels and floodplains	36	61
Alluvial plains	6	10
Slopes	14	23
Downs	1	2
Uplands	2	4
Plateau	0	0

Site types associated with the landscapes most-frequently recording sites (channels and floodplains and slopes) show that channels and floodplains landscapes are more likely to contain modified trees and that slopes landscapes are more likely to contain artefact scatters and isolated finds (Table 2-4).

Table 2-4: Frequency of site types in association with landscape types (OzArk 2016).

Site type	Channels and floodplains	Slopes	Alluvial Plains
Artefact scatter	11 (30.5%)	7 (50%)	3 (50%)
Isolated finds	4 (11%)	3 (21%)	3 (50%)
Modified trees	21 (58.5%)	4 (29%)	0 (0%)

In terms of drainage buffers, OzArk (2016) found that 27 sites (or 46% of all sites) were recorded with the Drainage 1 buffer and 10 sites (or 17% of all sites) were recorded within the Drainage 2 buffer. Therefore, more than 63% of all sites were recorded within the two drainage buffers, with a clear bias toward Drainage 1 buffers.

The Stage 2 area is located within Mitchell's Warrumbungle Slopes landform with the Stage 1 area within the Bugaldie Uplands landform. With reference to the study area the above study (taken in context with the steepness of slope and level of disturbance) that site location is unlikely within the Stage 2 area. The Stage 1 area has an even smaller probability for site location given that it falls within an uplands landform. The distribution of recorded sites in the region suggests:

- Artefact sites may occur anywhere in the landscape and are vastly more common and display a greater assemblage diversity in association with availability of water resources with permanent water associated with larger and more permanent camps. Omnipresent water (such as that found in 4th order or greater channels) would have supported larger populations for longer periods. Whereas ephemeral water sources such as 1st through to 3rd order channels may only have supported transient habitation which would have limited assemblage diversity. Seasonal water availability also affects the presence of prey and floral species and this would also have affected the use of the area by Aboriginal people. The study area at present lies in proximity to only ephemeral drainage lines but the area may have provided Aboriginal people with more plentiful water in the past due to the migratory nature of drainage channels in the area. As a result larger sites may be located unexpectedly in the region.

- PAD are areas where artefacts may occur in a sub-surface context with or without surface expression. To be considered PAD the area must not have suffered previous ground disturbance but generally will be governed by factors discussed above in regard to artefact sites. As above, PAD may occur in proximity to the study area but only where some stratigraphy remains intact.
- Culturally modified trees can only occur anywhere where trees displaying the right level of maturity continue to exist but once again will occur more frequently in association with larger camps and water resources. Culturally modified trees could potentially exist throughout the region but due to the lack of mature Eucalypts within the study area are unlikely.
- Rock art sites contain artworks created by Aboriginal people on rock surfaces. These include stencils, prints and drawings in rock shelters, and engravings in limestone caves. Rockshelter paintings are usually of small stick figures, other simple forms such as kangaroo and emu tracks, sets of stripes or bars, hand prints and hand stencils. Many of the sites with these attributes have been recorded in the Warrumbungles to the east as rock overhangs require areas with gradient to occur.
- Burials are generally found in soft sediments such as aeolian sand, alluvial silts and rock shelter deposits. In valley floor and plains contexts, burials may occur in locally elevated topographies rather than poorly drained sedimentary contexts. Burials are also known to have occurred on rocky hilltops in some limited areas. Burials are generally only visible where there has been some disturbance of sub-surface sediments or where some erosional process has exposed them. This rare site type is also a feature of areas that Aboriginal people frequented in numbers and may have been subject to reuse. The generally shallow rocky nature of the soils within the study area ensures that burials are unlikely.
- Grinding groove sites contain oval-shaped indentations in sandstone outcrops made by Aboriginal people shaping and sharpening edge-ground stone axes. Flat, low outcrops of fine-grained sandstone were preferred, and Aboriginal people sometime carried small pieces of sandstone with them for sharpening axes. Axe-grinding grooves are usually located on the edges of rivers, creeks, lakes and swamps or near dry or drained water bodies. As the study area possesses no sandstone outcrops it is unlikely that any will occur in the study area.
- Less commonly encountered site types such as Aboriginal Ceremony and Dreaming and Aboriginal Resource and Gathering are varieties of landscape features and natural sacred sites that are regarded as highly sacred to Aboriginal people. Such features may include mountains, waterholes, caves, and rock formations. Additionally, the flora and fauna that inhabit these landscapes also carry Aboriginal cultural significance particularly where these items were used both economically and medicinally. These sites have been recorded in the surrounding area and can occur wherever plants of economic or medicinal value are found or natural features of significance are seen. Therefore it is possible that sites of this type exist in the study area.

The study area has not been previously assessed and information detailed in **Section 2.3.2** presents the only available information that specifically relates to the study area: an AHIMS search. There are no known cultural values or Aboriginal sites pertaining directly to the location

of the proposed work. No Aboriginal community members accompanied the current visual inspection.

2.3.4 Step 2c

Are there any landscape features that are likely to indicate presence of Aboriginal objects?

The study area does not contain landforms identified as having archaeological sensitivity.

The Due Diligence guidelines identify several landforms that have archaeological sensitivity. If a proposal impacts such landforms, the Due Diligence process advances to Step 3.

The identified landforms within the Due Diligence guidelines are:

- within 200 m of waters, or
- located within a sand dune system, or
- located on a ridge top, ridge line or headland, or
- located within 200 m below or above a cliff face, or
- within 20 m of or in a cave, rock shelter, or a cave mouth
- and is on land that is not disturbed land then the proposal progresses to step 3.

Despite the fact that the study area lies in proximity to identified AHIMS sites there is some distance between it and the nearest sources of reliable drinking water. Many of the water channels nearby are extremely ephemeral and would only contain water immediately following rain events. The study area lies 4.7 km north of the fourth order channel of Barronne Creek which would only carry water seasonally and has its confluence with the Castlereagh River approximately 28 km to the west. The study area lies 1.8 km south of the 2nd order channel of Tenandra Creek which is ephemeral and forms a tributary of the Magometon Creek with the confluence lying 28 km to the northwest. Magometon Creek eventually flows into the Castlereagh River near Coonamble 42 km to the northwest. The largest stream to the south of the study area is Gulargambone Creek the 5th order channel of which lies 15 km to the south and also flows to the Castlereagh River 28 km to the southwest of the study area. All the aforementioned watercourses rise in the Warrumbungle Mountains to the east of the study area. Whilst modified trees may occur anywhere in the landscape many of the other site types particularly those exhibiting occupation required nearby water and it is this factor that govern both extent and artefact assemblage size and diversity. It is expected that the majority of sites will occur in proximity to the larger watercourses mentioned above particularly around their confluences.

The study area lies immediately to the south of the landscape feature known as Tenandra Hill which rises 100 m above the surrounding landscape. Evidence of Aboriginal occupation in the

form of culturally modified trees and artefact sites exist to the north of this feature which would have provided a vantage point from which to survey the surrounding area. A small unnamed ephemeral drainage line bisects the study area between the low rise in the Stage 1 area and Mt. Tenandra.

At present the study area is some distance from the nearest reliable sources of water, however it has been noted that water courses within the region are known to have migrated across adjoining landforms. Therefore it is possible that the study area may have provided a greater source of resources in the past. However the agricultural processes of vegetation clearance, pastoralism, ploughing and the cultivation of crops will all have taken a toll on the preservation of many site types both in the study area and the surrounding region.

2.3.5 Step 3

Can harm to Aboriginal objects listed on AHIMS or identified by other sources of information and/or can the carrying out of the activity at the relevant landscape features be avoided?

Yes. There are no known sites or landforms of archaeological sensitivity within the study area.

All landforms within the study area have already been modified through historic vegetation clearance, pastoral use and cultivation.

The proponent, however, has elected to apply the precautionary principle and proceed to a visual inspection to confirm the findings of the desktop assessment.

2.3.6 Step 4

Does a desktop assessment and visual inspection confirm that there are Aboriginal objects or that they are likely?

The visual inspection of the study area was undertaken by OzArk archaeologist, Kirwan Williams, on Thursday 24 October 2019.

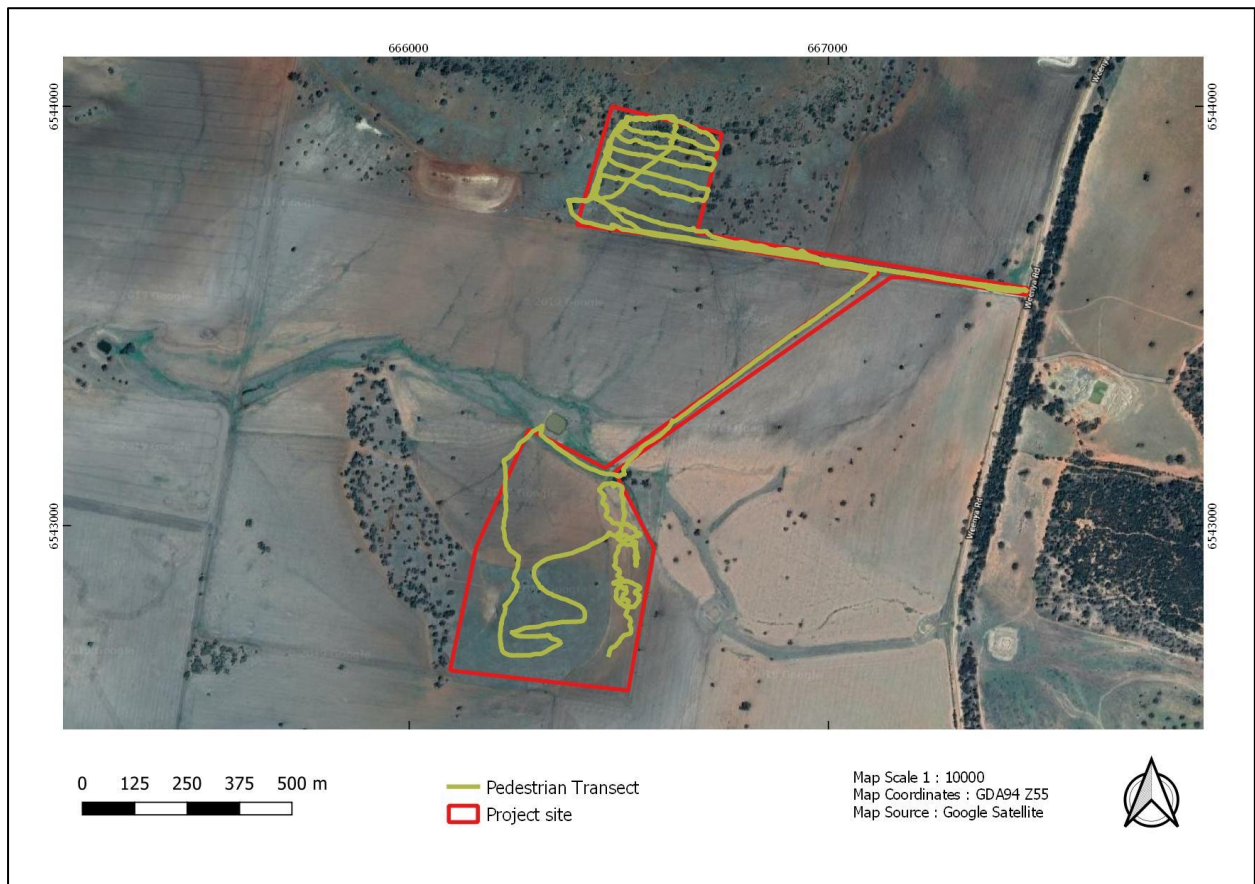
The study area is situated over a flat plain with the Stage 1 Area encompassing a small hill to the south of Mt Tenandra. The Stage 2 area is situated on the southern lower to mid-slope portion of Mt. Tenandra itself. Pedestrian transects were undertaken across the entirety of both the Stage 1 area and Stage 2 areas with all associated access tracks also inspected.

Stage 1 area. This area approximately 600 m north to south by 500 m west to east encompassed a low hill in its southern section and it is this area that is to be utilised as the extraction area with the remaining flat area to the north for stockpile purposes. This circular hill is littered with basalt fragments lying among areas of outcropping basalt (**Plates 3 and 4**). This landform has very little soil towards its peak with the amount of friable soils increasing further down the slope. The northern section of the Stage 1 area has been cultivated and used for the production of wheat

and is bounded to the north by a small ephemeral drainage line. Existing vegetation consists of low grasses and herbs in previously uncultivated areas with other portions to the north and west presently under cultivation (**Plate 1**). A large area on the eastern side of the Stage 1 area has previously been cultivated but was bare at the time of the inspection with the only vegetation consisting of a dense growth of thistle. Soils where visible were of variable depth but were uniformly red in colour and fine in texture. In the western section of this area a large gouge existed in the side of the hill with a pile of rock fragments stockpiled nearby (**Plate 2**). Overall, the ground surface exposure (GSE) was approximately 75% across the study area (outside cultivated areas) and the ground surface visibility (GSV) within available exposures was approximately 50–60%. Soils across the study area were all visibly disturbed, with a narrow gravel vehicle track oriented north to south and to the eastern side of the low hill. Generally, soils comprised a medium to coarse-grained pink to red sandy loam (**Plate 5**). Large amounts of small pebbles were identified within ground exposures on the northern and western extremities of the Stage 1 area. All large vegetation within the Stage 1 area had been removed with the only extant vegetation comprises small grasses and herbs. Disturbances in the study area include extensive landform clearing, and earthworks associated with the stockpiled rock in the western portion of the area. Sheetwash accounts for the remainder of visible disturbance factors within the study area. The basalt in this location was not of the quality generally seen to have been utilised by Aboriginal people and no evidence of quarrying was found. However, as a result of the visual inspection, a fairly extensive scatter of stone artefacts was recorded in the north-eastern sector of the Stage 1 area despite the present ephemeral nature of the adjacent drainage line (refer to **Section 3**).

Stage 2 area. The 280 m x 290 m study area comprised the southern mid to lower slope of Mt. Tenandra. The grade of this slope went from gentle on the lower slope to moderately steep by within the mid-slope region of this landform. Ground disturbance was quite evident on the lower slope section of the Stage 2 area with freshly cut bunds and windrows evident and a freshly graded vehicular track along the southern boundary (**Plates 6 and 7**). As with the Stage 1 area, the area has been subject to vegetation clearance with the dominant regrowth consisting of Kurrajong (*Brachychiton* sp) in steeper portions of the study area with *Acacia* sp. dominant on the lower slopes with an understorey of grass and various weeds. The grey silty-loam that characterises the area is quite variable in depth with a greater depth exhibited across the lower slope as a result of various types of slopewash with parts of the mid-to lower slope comprised largely of outcropping basalt and fragments thereof (**Plates 8 and 9**). Overall, the GSE was approximately 60% across the study area and the GSV within available exposures was approximately 50–60%. (**Plate 10**). The basalt at this location was not of the quality generally seen to have been utilised by Aboriginal people and no evidence of quarrying was found. All access tracks were inspected (**Plate 11 and Figure 2-3**).

Figure 2-2: Survey coverage within the study area.



2.4 PROJECT CONSTRAINTS

There are no identified constraints to this project with regard to historic heritage in either the Stage 1 or Stage 2 areas.

There are no identified constraints to this project with regard to Aboriginal heritage in the Stage 2 area.

An Aboriginal site was recorded as a result of the inspection in the north-eastern sector of the Stage 1 area (refer to **Section 3**).

All portions of the study area were able to be accessed (**Figure 2 2**).

2.5 DISCUSSION

As discussed above, all sections of the study area were able to be accessed during the visual inspection. The inspection found that both the Stage 1 area to the south and the Stage 2 area to the north to have been subject to various types and levels of disturbance over time. These consisted of earthmoving for the formation and maintenance of vehicle tracks, vegetation clearance (as evidenced by the general age of extant vegetation) grazing and pastoral activity, and crop cultivation. Despite these disturbances, an artefact scatter of large extent, but displaying a relatively low density of artefacts, was located within the north-eastern portion of the Stage 1

area and on boundary of it. That the boundary of the site encompasses the entire surface and includes a potential sub-surface manifestation is due to the following factors:

- The artefacts lie in a previously cultivated zone and it is likely that artefacts have been transferred from the sub-surface to the surface by the process of ploughing
- Other sections of the same landform to the west (also previously cultivated) displayed no signs of artefactual material despite being subject to the same process
- Mt. Tenandra OS1 is bounded by the ephemeral drainage line to the north and east, by the property fence along the eastern boundary, by the vehicle track to the west and by 666487E 6542850N to the south (230 m x 100 m)

The remainder of the Stage 1 and Stage 2 areas (apart from the footprint of the newly recorded site) are unlikely to retain any archaeological signature given the extensive ground disturbance throughout the area. It is therefore considered that all other portions have a low potential to contain Aboriginal objects. Mt Tenandra OS1 was found within the original proposed extraction area and stockpile area. In order to minimise impact to the significant areas the quarry layout has been redesigned to ensure artefacts remain in place and unharmed by the proposal.

2.5.1 Conclusion

The proponent has undertaken to modify the project footprint so as to avoid Mt Tenandra OS1 altogether to avoid any impact from quarrying activities. As a **(Section 5)**. However, if impacts to the site cannot avoid damaging Aboriginal objects, then further investigation will be required.

The reasoning behind this determination is set out in **Table 2-5**.

Table 2-5: Due Diligence Process application.

Item	Reasoning	Answer
Will the activity disturb the ground surface or any culturally modified trees?	The proposed works would disturb the ground surface through earthmoving and track construction. The proposal would not involve the disturbance of any culturally modified trees.	Yes
Are there any relevant records of Aboriginal heritage on site (AHIMS or from other sources), or landscape features that are likely to indicate presence of Aboriginal objects?	AHIMS on the 21 October 2019 indicated no Aboriginal sites within the study area.	No
Can harm to Aboriginal objects or relevant landscape features be avoided?	There are no known items of Aboriginal significance present in the study area, and landforms with identified archaeological sensitivity are not present.	Yes
Does a desktop assessment and visual assessment confirm that there are Aboriginal objects or that they are likely?	The visual inspection a previously unrecorded artefact scatter in the study area and that subsurface artefacts are likely (albeit in a disturbed state). However, due to the nature of the proposal, the proponent is able to avoid the site if the recommended management measures are implemented (Section 5). Due to the level of historic modification it is assessed that there is a low likelihood of there being subsurface archaeological deposits within the broader study area.	No
AHIP not necessary. Proceed with caution.		

3 ABORIGINAL HERITAGE SITES RECORDED

One previously unrecorded Aboriginal site was identified during the visual inspection: Mt. Tenandra OS1. **Table 3-1** summarises the main features of this site.

Table 3-1: Mt Tenandra OS1: site features.

Site Name	Coordinates (GDA)	Site type	Artefact Count	Site Dimensions (m)
Mt. Tenandra OS1	666486 6542865 (SW) 666486 6542965 (W) 666466 6543100 (NW) 666513 6543090 (NE) 666587 6542950 (E) 666575 6542865 (SE)	Artefact Scatter	100+	230m (N-S) Max 100m (E-W) Max

Mt. Tenandra-OS1

Site Type: Open camp site

Location of Site: The site is situated on the lower slope to the north and north-east of a small outcropping of basalt material and south and south-west of a small and unnamed ephemeral drainage line and had an open aspect (**Figure 3-1**). The site is approximately 735 m west of Weenya Road, on private property, and nearly equally distant from Coonamble–Tooraweenah Road to the north and Gulargambone Road to the south. The site is approximately 28 km east-northeast of Gulargambone.

Description of Site: The site consists of 100+ stone artefacts spread relatively consistently across an area 230 m north to south and 100 m east to west. Artefacts were manufactured from silcrete, quartz, mudstone, and petrified wood with one broken basalt ground-edge axe noted. The area of the site has previously cultivated but fallow at the time of the inspection with numerous thistles comprising the only vegetation. The site is situated within an exposure, had a GSE of approximately 75% and GSV within that exposure of 100%. Soils consisted of a pink to grey silty sand. Many other stone fragments were observed. Disturbances include vegetation clearance, cultivation and, water wash.

Figure 3-1: Mt. Tenandra OS1. View of site and selection of recorded artefacts.





	
1. View north to Mt Tenandra OS1 site location.	2. Mudstone Core from Mt. Tenandra OS1.
	
3. Petrified Wood Flake from Mt. Tenandra OS1.	4. Broken Basalt Edge-Ground Axe from Mt. Tenandra OS1.

Figure 3-2: Location of Mt. Tenandra OS1 in relation to the study area.

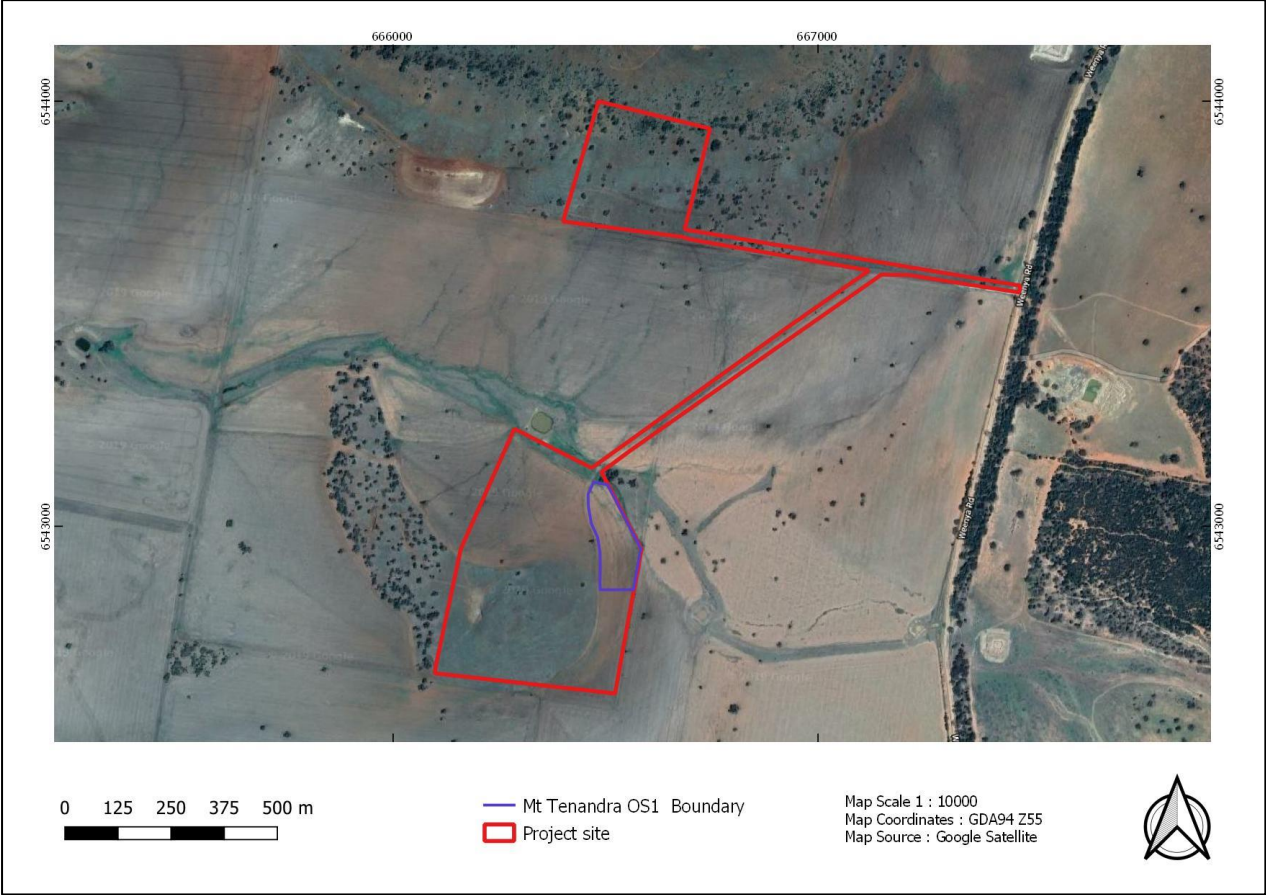
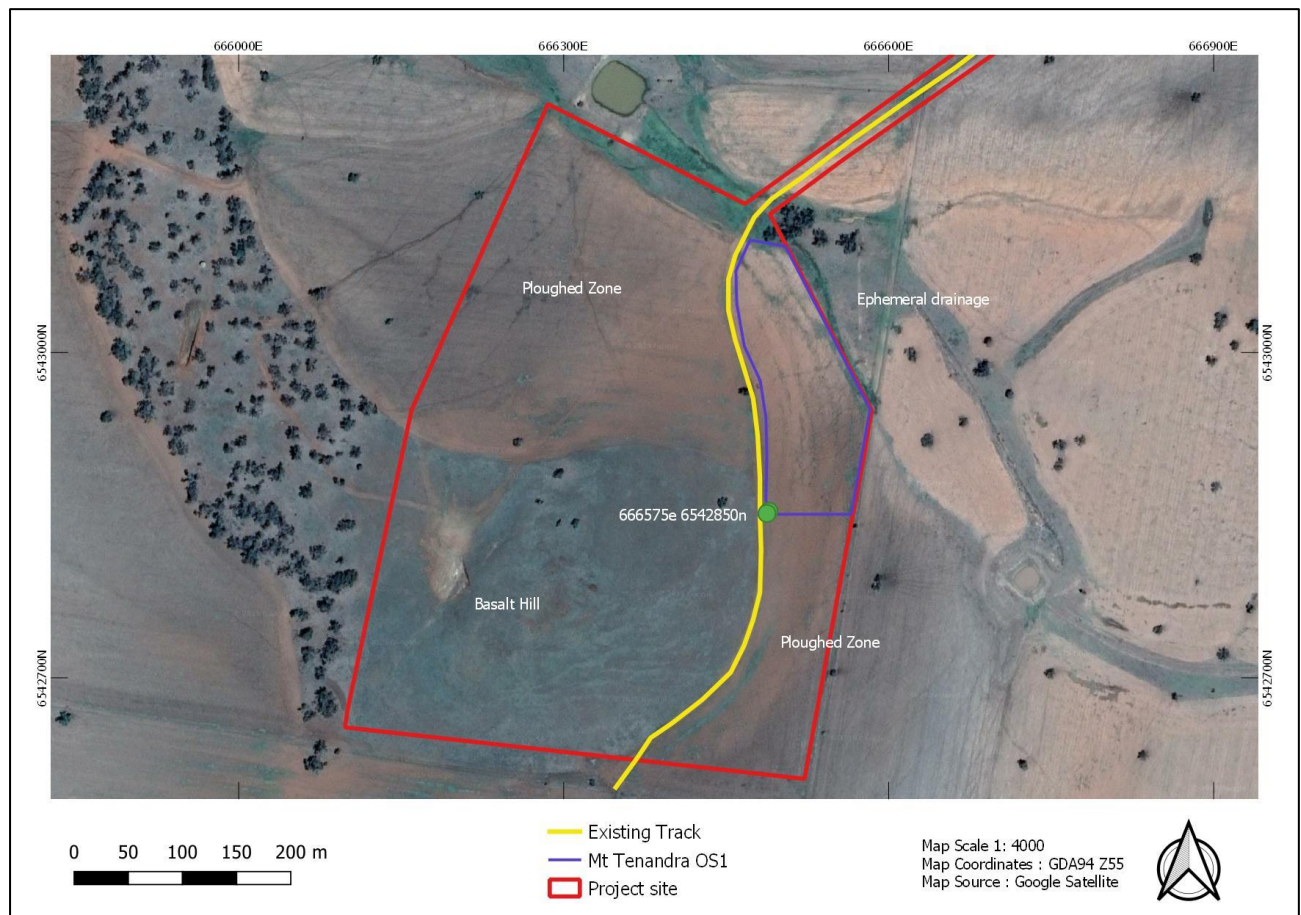


Figure 3-3 Location of Mt. Tenandra OS1 in relation to the Stage 1 area.

3.1 ASSESSMENT OF SIGNIFICANCE

3.1.1 Introduction

The appropriate management of cultural heritage items is usually determined based on their assessed significance, as well as the likely impacts of any proposed developments. Cultural, scientific, aesthetic and historical significance are identified as baseline elements of significance assessment, and it is through the combination of these elements that the overall cultural heritage values of a site, place or area are resolved.

Social or Cultural Value

This area of assessment concerns the importance of a site or features to the relevant cultural group: in this case the Aboriginal community. Aspects of social value include assessment of sites, items, and landscapes that are traditionally significant or that have contemporary importance to the Aboriginal community. This importance involves both traditional links with specific areas, as well as an overall concern by Aboriginal people for their sites generally and the continued protection of these. This type of value may not be in accord with interpretations made by the archaeologist: a site may have low archaeological value but high social value, or vice versa.

Archaeological/Scientific Value

Assessing a site in this context involves placing it into a broader regional framework, as well as assessing the site's individual merits in view of current archaeological discourse. This type of value relates to the ability of a site to answer current research questions and is also based on a site's condition (integrity), content and representativeness.

The overriding aim of cultural heritage management is to preserve a representative sample of the archaeological resource. This will ensure that future research within the discipline can be based on a valid sample of the past. Establishing whether a site can contribute to current research also involves defining 'research potential'. Questions regularly asked when determining significance are: can this site contribute information that no other site can? Is this site representative of other sites in the region?

Aesthetic Value

This refers to the sensory, scenic, architectural and creative aspects of the place. It is often closely linked with the social values. It may consider form, scale, colour, texture and material of the fabric or landscape, and the smell and sounds associated with the place and its use (Burra Charter 2013).

Historic Value

Historic value refers to the associations of a place with a historically important person, event, Stage or activity in an Aboriginal community. Historic places do not always have physical evidence of their historical importance (such as structures, planted vegetation or landscape modifications). They may have 'shared' historic values with other (non-Aboriginal) communities.

Places of post-contact Aboriginal history have generally been poorly recognised in investigations of Aboriginal heritage. Consequently, the Aboriginal involvement and contribution to important regional historical themes is often missing from accepted historical narratives. This means it is often necessary to collect oral histories along with archival or documentary research to gain enough understanding of historic values.

3.2 ASSESSED SIGNIFICANCE OF THE RECORDED SITES

Table 3-2 presents a summary of the significance assessment of Aboriginal cultural heritage sites recorded during this assessment. Further details of each of the assessment criteria are provided below.

Social or Cultural Value

All Aboriginal sites are accorded high cultural value as they provide a tangible links of Aboriginal people and the land.

Archaeological/Scientific Value

Mt. Tenandra OS1 is assessed as low as all artefacts are in secondary context. The site is described as having low scientific / archaeological significance based on the following factors:

- Low density of artefacts
- Widespread human landform modification due to ploughing
- Not possible to determine the original or primary context of the recorded artefacts
- Very few recorded artefacts in good condition, likely a result of their disturbed context and being constantly churned by agricultural machinery
- Limited research potential.

Aesthetic Value

Mt. Tenandra OS1 does not contain any features that are likely to be appreciated on aesthetic grounds, either as individual objects or in terms of setting within a landscape which has been impacted by vegetation clearance and farming practices.

Historic Value

Mt. Tenandra OS1 does not have a direct relationship with known Aboriginal persons or historic events. This site is therefore assessed as having no historic value.

Table 3-2: Aboriginal cultural heritage: significance assessment.

Site Name	Social or Cultural Value	Archaeological / Scientific Value	Aesthetic Value	Historic Value
Mt Tenandra OS1	High	Low	Low	None

3.3 LIKELY IMPACTS TO ABORIGINAL HERITAGE FROM THE PROPOSAL

Table 3-3 presents a summary of potential impacts to Aboriginal cultural heritage associated with the proposal provided the recorded site and its exclusion zone can be avoided by the proponent (**Section 5**). The nature of the proposal suggests that harm to recorded Aboriginal objects can be avoided. If in the future impacts cannot avoid damaging Aboriginal objects, then further investigation will be required.

Table 3-3: Aboriginal cultural heritage: impact assessment.

Site Name	Type of Harm (Direct/Indirect / None)	Degree of Harm (Total/Partial / None)	Consequence of Harm (Total/Partial/No Loss of Value)
Mt. Tenandra OS1	None	None	No Loss of Value

4 HISTORIC HERITAGE ASSESSMENT: BACKGROUND

4.1 INTRODUCTION

The current assessment will apply the Heritage Council *Historical Archaeology Code of Practice* (Heritage Council 2006) in the completion of a historical heritage assessment, including field investigations.

4.2 BRIEF HISTORY OF THE TENANDRA AREA

The first non-Aboriginal person to Southern Brigalow Belt was George Evans travelling in 1818 with the exploration party of Surveyor-General John Oxley. George Evans was Oxley's assistant for the tour of exploration. The group had departed from Bathurst in May 1818, sent by Governor Macquarie to explore the Macquarie River. This expedition would follow the Macquarie River to a point where it was unable to keep tracking it any further, and so would turn east away from the Macquarie, finally ending up on the coast at Port Macquarie. In early July, the party returned from the Macquarie Marshes to Mt Harris, 48 km (30 miles) north-northwest of present-day Warren. Seemingly unable to further follow the course of the Macquarie, Oxley had to change his plans. He decided to send Evans ahead, with a small party, to scout a north-easterly route across the plains, and report back. Beginning on 8 July 1818, Evans would end up traversing a large loop, north-easterly then south-easterly, then westerly and back to his starting point. In the north-easterly direction, he first crossed the Castlereagh River around Combara, between Gulargambone and Coonamble.

From the 1830s, pastoralists began squatting on the Castlereagh, commonly moving north-westerly from the Mudgee area moving cattle onto land along the river, cared for by employed men who were often assigned convicts or ex-convicts. The area was at that time outside the official nineteen counties limits of settlement. This meant that pastoralists sending their stock westwards were technically squatting illegally, taking the land for free.

In 1834, Andrew Brown explored the area near the Warrumbungles for his employer James Walker of Wallerawang, with the assistance of local Aboriginal people, and established several cattle runs, having already established "Cuigan" up from Mendooran at least in 1836. In 1837 Brown applied for simply an area in northern district of Bligh at Big River. In 1837 Robert Bennett applied for "Brumbel" or "Briamble" on 'Big River' and in about 1839, he occupied "Kirban" station (adjoining Robert Lowe's 'Yalcogrin') which became the present-day Curban area. In 1836, ex-convict John Jude took up "Carlingangong" or "Carlingoing going" with John Hall, and then applied for 'Armatree' in 1839. There was a flurry of licence applications in 1836 when squatting was legalised, and individual runs were set at a maximum of 16,000 acres with the requirement that licence fees be paid.

There is a paucity of facts regarding the history of the Mt Tenandra area. The earliest parish maps show that from 1882 the present study area was jointly in the possession of three related people Christlep, Peter and Fritz Steinhauer under the name Tenandra Run. By 1909 large sections of country had been resumed with land surrounding the study area held by the Commercial Banking Company of Sydney and a person by the name of F. Friend.

In 1952 nine blocks within the Tenandra Estate were made available for war service land settlement to the War Settlement Board. 1939 ex-servicemen applied with the land encompassing the study area going to a James Milne Chew following a ballot at the Coonamble RSL.

4.3 LOCAL CONTEXT

4.3.1 Desktop database searches conducted

A desktop search was conducted on the following databases to identify any potential previously-recorded heritage within the study area. The results of this search are summarised in **Table 4-1**.

Table 4-1: Historic heritage: desktop-database search results.

Name of Database Searched	Date of Search	Type of Search	Comment
National and Commonwealth Heritage Listings	22 October 2019	Coonamble LGA	The nearest items of national significance include the Warrumbungle's to the east
State Heritage Listings	22 October 2019	Coonamble LGA	The nearest items of state significance occur in Coonamble town
Local Environment Plan (LEP)	22 October 2019	Coonamble LGA	The nearest items of local significance are located in Coonamble town

A search of the Heritage Council of NSW administered heritage databases and the Coonamble LEP returned no records for historical heritage sites within the designated search areas.

The nearest sites listed in both the Coonamble LEP and State Heritage Register are all located in Coonamble town.

The nearest nationally listed item is the Warrumbungle ranges to the east.

4.4 SURVEY METHODOLOGY

The visual inspection of the study area was undertaken by OzArk archaeologist, Kirwan Williams, on Thursday 22 October 2019 at the same time as the assessment for Aboriginal heritage.

Standard archaeological field survey and recording methods were employed (Burke and Smith 2004). The study area was inspected on foot, with emphasis placed on aspects of the study area proposed for ground impact. Error! Reference source not found. illustrates the pedestrian transects recorded by OzArk during the field inspection.

The study area is described in **Section 2.3.6**.

4.5 RESULTS

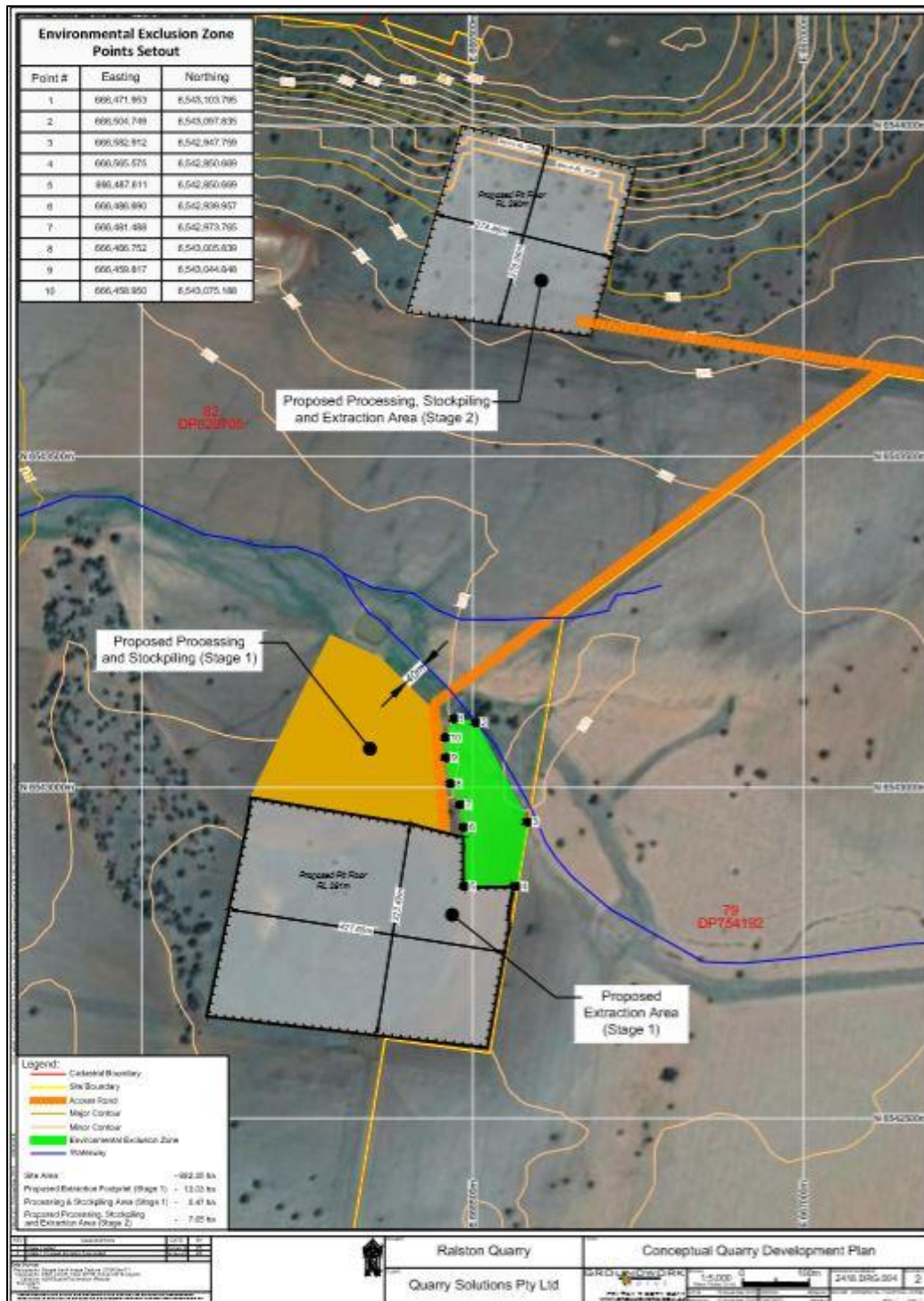
No items of historic heritage significance were noted within the study area and it was assessed that there is no potential for there to be archaeological deposits within the study area.

5 MANAGEMENT RECOMMENDATIONS

5.1 MANAGEMENT OF MT. TENANDRA OS1

Appropriate management of cultural heritage items is primarily determined based on their assessed significance as well as the likely impacts of the proposed development. The most appropriate management of Mt. Tenandra OS1 would be for the site to be avoided.

Figure 5-1 Location of Mt. Tenandra OS1 (green) excised from the quarry footprint as an environmental exclusion zone from the Stage 1 area.



As the site is bounded by physical barriers to the north (drainage line) and west toward the Stage 1 extraction area (vehicle track) the site may be easily avoided by:

- No activity to the east of the vehicle track and north of 666487E 6542850N GDA94
- If the track requires widening it can only be to the west
- Ultimately a “hard” physical barrier such as temporary fencing with star pickets and hi-vis cable along the project side of the site may be warranted to avoid inadvertent damage.

If impact is unavoidable then approval to disturb sites under the authority of an AHIP must be sought from Biodiversity and Conservation Division (BCD) of the Department of Planning, Industry and Environment (DPIE). Aboriginal community consultation will also need to occur following the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (ACHCRs) would be a requirement. If an AHIP is granted, the local Aboriginal communities may wish to collect or relocate any evidence of past Aboriginal occupation (Aboriginal objects), whether temporarily or permanently. The fate of all artefacts remains within the statutory control of the BCD. A care and control permit may be issued to local Aboriginal groups or, with Aboriginal community consent, to other parties, for educational or display purposes.

5.2 RECOMMENDATIONS FOR ABORIGINAL CULTURAL HERITAGE

The undertaking of the Due Diligence process resulted in the conclusion that the proposed works will have an impact on the ground surface, however, no Aboriginal objects or intact archaeological deposits will be harmed by the proposal provided the new site Mt. Tenandra OS1 is managed as per the recommendations in **Section 5.1**. This moves the proposal to the following outcome:

AHIP application not necessary. Proceed with caution. If any Aboriginal objects are found, stop work and notify the BCD. If human remains are found, stop work, secure the site and notify NSW Police and BCD.

To ensure the greatest possible protection to the area's Aboriginal cultural heritage values, the following recommendations are made:

- 1) To avoid impact to Mt. Tenandra OS1, the following management should be followed:
 - No activity to the east of the vehicle track and north of 666487E 6542850N GDA94 (Refer to **Figure 3-3**)
 - If the track requires widening it should only be from the western side of the existing track.

The area of significance will be appropriately demarcated. This will include fencing with Hi-vis flagging to alert quarry workers that the area is a sensitive environmental zone.

- 2) If impact is unavoidable to Mt. Tenandra OS1 then approval to disturb sites under the authority of an AHIP must be sought from the BCD. Aboriginal community consultation will also need to occur following the ACHCRs)
- 3) If Mt. Tenandra OS1 is avoided, the proposed work may proceed within the study without further archaeological investigation under the following conditions:
 - a) All land and ground disturbance activities must be confined to within the study area, as this will eliminate the risk of harm to Aboriginal objects in adjacent landforms. Should the parameters of the proposal extend beyond the assessed areas, then further archaeological assessment may be required.
 - b) All staff and contractors involved in the proposed work should be made aware of the legislative protection requirements for all Aboriginal sites and objects.
- 4) This assessment has concluded that there is a low likelihood that the proposed work will adversely harm Aboriginal cultural heritage items or sites if Mt. Tenandra OS1 is avoided. However, during works, if Aboriginal artefacts or skeletal material are noted, all work should cease and the procedures in the *Unanticipated Finds Protocol* (**Appendix 2**) should be followed;
- 5) Work crews should undergo cultural heritage induction to ensure they recognise Aboriginal artefacts (see **Appendix 3**) and are aware of the legislative protection of Aboriginal objects under the NPW Act and the contents of the *Unanticipated Finds Protocol*.
- 6) The information presented here meets the requirements of the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales*. It should be retained as shelf documentation for five years as it may be used to support a defence against prosecution in the event of unanticipated harm to Aboriginal objects.

5.3 HISTORIC HERITAGE

The inspection of the study area confirmed that no items of historic heritage significance exist or are unlikely to exist in the study area.

Despite the fact that it is extremely unlikely that the proposed works will encounter significant historic items, an *Unanticipated Finds Protocol* has been included as **Appendix 4** and this should be followed in the unlikely event that any significant historic objects are noted.

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<https://trove.nla.gov.au/newspaper/article/135261796?searchTerm=j%20m%20chew%20tenandra&searchLimits=l-state=New+South+Wales> : accessed 23/10/2019

PLATES



Plate 1: View north toward Mt. Tenandra and the Stage 2 study area.



Plate 2: View southwest, towards the existing stockpile within the Stage 1 area.



Plate 3: View northeast, from the summit of the Stage 1 area across Mt. Tenandra OS1.

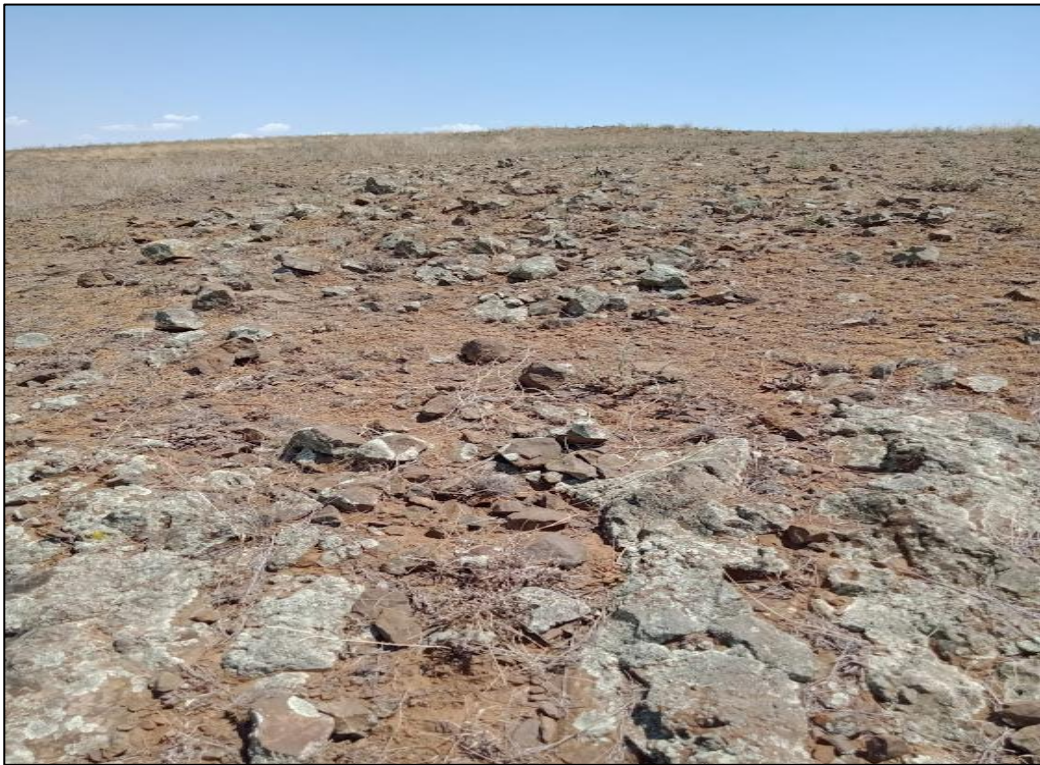


Plate 4: Outcropping basalt in Stage 1 area.



Plate 5: Typical ground surface within the Stage 1 area.



Plate 6: View north toward Mt. Tenandra from the southern end of the Stage 2 area.



Plate 7: View east across freshly created bund.



Plate 8: View south, from mid-slope of Mt. Tenandra (the northern boundary of the Stage 2 area).



Plate 9: Typical vegetation and ground surface on Mt. Tenandra.




Plate 10: Typical ground surface within the Stage 2 area.



Plate 11: View west along proposed access from Weenya Road toward Mt Tenandra.

APPENDIX 1: AHIMS SEARCH RESULTS



Office of
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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : 25k coonamble

Client Service ID : 457965


SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
28-1-0038	Camp Blackman Artefact Scatter	GDA	55	690330	6537822	Open site	Valid	Artefact :-		
	Contact	Recorders	Mr.Patrick Gaynor							
28-1-0050	Namen fire Trail	GDA	55	686735	6526471	Open site	Valid	Modified Tree (Carved or Scarred) :-	Permits 3392	
	Contact	Recorders	Mr.Malcolm Ridges,Office of Environment & Heritage							
28-1-0051	Namen Trail Tree	GDA	55	685670	6526639	Open site	Valid	Modified Tree (Carved or Scarred) :-	Permits	
	Contact	Recorders	Mr.Malcolm Ridges,Office of Environment & Heritage							
28-1-0052	Gulgambone Road Tree	GDA	55	670233	6541095	Open site	Valid	Modified Tree (Carved or Scarred) :-	Permits	
	Contact	Recorders	Mr.Malcolm Ridges,Office of Environment & Heritage							
28-1-0083	Mungery Creek ST6	GDA	55	671059	6552027	Open site	Valid	Modified Tree (Carved or Scarred) :-	Permits	
	Contact	Recorders	Jacobs Group (Australia) Pty Ltd - Newcastle,Mr.Andy Roberts							
28-1-0084	Mungery Creek ST5	GDA	55	671042	6552074	Open site	Valid	Modified Tree (Carved or Scarred) :-	Permits	
	Contact	Recorders	Jacobs Group (Australia) Pty Ltd - Newcastle,Mr.Andy Roberts							
28-1-0085	Mungery Creek ST4	GDA	55	670557	6551849	Open site	Valid	Modified Tree (Carved or Scarred) :-	Permits	
	Contact	Recorders	Jacobs Group (Australia) Pty Ltd - Newcastle,Mr.Andy Roberts							
28-1-0086	Mungery Creek ST3	GDA	55	670924	6551814	Open site	Valid	Modified Tree (Carved or Scarred) :-	Permits	
	Contact	Recorders	Jacobs Group (Australia) Pty Ltd - Newcastle,Mr.Andy Roberts							
28-1-0087	Mungery Creek ST2	GDA	55	670911	6551741	Open site	Valid	Modified Tree (Carved or Scarred) :-	Permits	
	Contact	Recorders	Jacobs Group (Australia) Pty Ltd - Newcastle,Mr.Andy Roberts							
28-1-0088	Mungery Creek ST 1	GDA	55	669941	6552126	Open site	Valid	Modified Tree (Carved or Scarred) :-	Permits	
	Contact	Recorders	Jacobs Group (Australia) Pty Ltd - Newcastle,Mr.Andy Roberts							

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AHIMS Web Services (AWS)

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Client Service ID : 457965

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
28-1-0089	Gulgambone Creek ST1	GDA	55	659713	6527784	Open site	Valid	Modified Tree (Carved or Scarred) :-		
	Contact	Recorders	Jacobs Group (Australia) Pty Ltd - Newcastle,Mr.Andy Roberts							
28-1-0090	Gulgambone Creek PAD2	GDA	55	659703	6528212	Open site	Valid	Artefact :-, Potential Archaeological Deposit (PAD) :-	Permits	
	Contact	Recorders	Jacobs Group (Australia) Pty Ltd - Newcastle,Mr.Andy Roberts							
28-1-0091	Gulgambone Creek PAD1	GDA	55	660031	6527565	Open site	Valid	Artefact :-, Potential Archaeological Deposit (PAD) :-	Permits	
	Contact	Recorders	Jacobs Group (Australia) Pty Ltd - Newcastle,Mr.Andy Roberts							
28-1-0057	Tenandra Creek AFT2	GDA	55	666620	6546442	Open site	Valid	Artefact :-	Permits	
	Contact	Recorders	Mr.Peter Saad							
28-1-0058	Table Top Mountain/Noonbar Creek ACD	GDA	55	675297	6565119	Open site	Valid	Aboriginal Ceremony and Dreaming :-	Permits	
	Contact	Recorders	Mr.Peter Saad							
28-1-0059	Caiga Creek AFT and PAD	GDA	55	675529	6563192	Open site	Valid	Aboriginal Resource and Gathering :-, Artefact :-, Potential Archaeological Deposit (PAD) :-	Permits	
	Contact	Recorders	Mr.Peter Saad							
28-1-0060	Gulgambone Creek Sth Bank AFT & PAD	GDA	55	654021	6530609	Open site	Valid	Artefact :-, Potential Archaeological Deposit (PAD) :-	Permits	
	Contact	Recorders	Mr.Peter Saad							
28-1-0061	Tenandra Creek AFT1 PAD	GDA	55	666651	6546651	Open site	Valid	Artefact :-, Potential Archaeological Deposit (PAD) :-	Permits	
	Contact	Recorders	Mr.Peter Saad							
28-1-0062	Box Ridge Road ST1	GDA	55	663875	6539327	Open site	Valid	Modified Tree (Carved or Scarred) :-	Permits	
	Contact	Recorders	Mr.Peter Saad							
28-1-0063	Box Ridge Road ST2	GDA	55	663603	6539278	Open site	Valid	Modified Tree (Carved or Scarred) :-	Permits	
	Contact	Recorders	Mr.Peter Saad							

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Your Ref/PO Number : 25k coonamble
 Client Service ID : 457965

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
28-1-0064	Box Ridge Road ST3	GDA	55	663365	6539240	Open site	Valid	Modified Tree (Carved or Scarred) : -		
	Contact	Recorders		Mr.Peter Saad				Permits		
28-1-0065	Calga Creek ST1	GDA	55	675949	6563177	Open site	Valid	Modified Tree (Carved or Scarred) : -		
	Contact	Recorders		Mr.Peter Saad				Permits		
28-1-0066	Tenandra Creek IF4	GDA	55	666726	6546177	Open site	Valid	Artefact : -		
	Contact	Recorders		Mr.Peter Saad				Permits		
28-1-0067	Tenandra Creek IF3	GDA	55	666558	6545928	Open site	Valid	Artefact : -		
	Contact	Recorders		Mr.Peter Saad				Permits		
28-1-0068	Tenandra Creek IF1	GDA	55	666875	6545798	Open site	Valid	Artefact : -		
	Contact	Recorders		Mr.Peter Saad				Permits		
28-1-0069	Tenandra Creek ST1	GDA	55	666596	6546262	Open site	Valid	Aboriginal Resource and Gathering : -, Modified Tree (Carved or Scarred) : -		
	Contact	Recorders		Mr.Peter Saad				Permits		
28-1-0070	Tenandra Creek ST2	GDA	55	666690	6546292	Open site	Valid	Modified Tree (Carved or Scarred) : -		
	Contact	Recorders		Mr.Peter Saad				Permits		
28-1-0071	Tenandra Creek IF2	GDA	55	666699	6545861	Open site	Valid	Artefact : -		
	Contact	Recorders		Mr.Peter Saad				Permits		
28-1-0072	Tenandra Creek AFT4	GDA	55	666653	6545827	Open site	Valid	Artefact : -		
	Contact	Recorders		Mr.Peter Saad				Permits		
28-1-0073	Tenandra Creek AFT3	GDA	55	666713	6546265	Open site	Valid	Aboriginal Resource and Gathering : -, Artefact : -		
	Contact	Recorders		Mr.Peter Saad				Permits		
28-1-0074	Tenandra Creek ST3	GDA	55	666567	6546081	Open site	Valid	Modified Tree (Carved or Scarred) : -		
	Contact	Recorders		Mr.Peter Saad				Permits		
28-1-0075	Tenandra Creek ST4	GDA	55	666563	6546074	Open site	Valid	Modified Tree (Carved or Scarred) : -		
	Contact	Recorders		Mr.Peter Saad				Permits		

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Client Service ID : 457965

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
	Contact	Recorders	Mr.Peter Saad					Permits		
28-1-0076	Tenandra Creek ST5	GDA	55	666566	6545999	Open site	Valid	Modified Tree (Carved or Scarred) : -		
	Contact	Recorders	Mr.Peter Saad					Permits		
28-1-0077	Tenandra Creek ST6	GDA	55	666568	6545998	Open site	Valid	Modified Tree (Carved or Scarred) : -		
	Contact	Recorders	Mr.Peter Saad					Permits		
28-1-0078	Tenandra Creek ST8	GDA	55	666557	6545976	Open site	Valid	Modified Tree (Carved or Scarred) : -		
	Contact	Recorders	Mr.Peter Saad					Permits		
28-1-0079	Tenandra Creek ST7	GDA	55	666567	6545994	Open site	Valid	Modified Tree (Carved or Scarred) : -		
	Contact	Recorders	Mr.Peter Saad					Permits		
28-1-0080	Calga Creek ST2	GDA	55	675421	6563403	Open site	Valid	Modified Tree (Carved or Scarred) : -		
	Contact	Recorders	Mr.Peter Saad					Permits		
28-1-0081	Tenandra Creek ACD2	GDA	55	666563	6545988	Open site	Valid	Aboriginal Ceremony and Dreaming : -		
	Contact	Recorders	Mr.Peter Saad					Permits		
28-1-0082	Tenandra Creek ACD1	GDA	55	666564	6546079	Open site	Valid	Aboriginal Ceremony and Dreaming : -		
	Contact	Recorders	Mr.Peter Saad					Permits		
28-1-0021	Kildary	AGD	55	660790	6551170	Open site	Valid	Burial : -	Burial/s	
	Contact	Recorders	Unknown Author					Permits		
28-1-0020	TS-ST-01	AGD	55	677750	6540580	Open site	Valid	Modified Tree (Carved or Scarred) : -	Scarred Tree	
	Contact	Recorders	Lloyd Nolan					Permits		
28-1-0022	BBS, Coonamble LALC, Tenandra Forrest ST1	AGD	55	662883	6545724	Open site	Valid	Modified Tree (Carved or Scarred) : 1		98925
	Contact	Recorders	Phil Purcell.Archaeological Surveys & Salvage ,Coonamble LALC - BBS Survey team					Permits		
28-1-0023	BBS, Coonamble LALC, Parmedman ST1	AGD	55	668442	6552525	Open site	Valid	Modified Tree (Carved or Scarred) : 1		98925

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
28-1-0024	Contact MWJ005	Recorders AGD	55	674707	6529964	Open site	Valid	Modified Tree (Carved or Scarred) : 2	Permits	
28-1-0026	Contact Wambelong Creek Scatter 1	Recorders AGD	55	686343	6538778	Open site	Valid	Artefact : 40	Permits	
28-1-0027	Contact Namen Trail Scar Tree 1	Recorders AGD	55	685554	6526464	Open site	Valid	Modified Tree (Carved or Scarred) : 1	Permits	
28-1-0028	Contact Namen Trail Artefact Scatter 1	Recorders AGD	55	686792	6526333	Open site	Valid	Artefact : 50	Permits	
28-1-0029	Contact Namen Trail Grinding Grooves 1	Recorders AGD	55	688269	6526420	Open site	Valid	Grinding Groove : 2	Permits	
28-1-0030	Contact Blackman's Gully Scar Tree 1	Recorders AGD	55	689588	6536497	Open site	Valid	Modified Tree (Carved or Scarred) : 1	Permits	
28-1-0031	Contact Northern Firetrail Waterhole 1	Recorders AGD	55	688446	6542195	Open site	Valid	Water Hole : 3	Permits	
28-1-0032	Contact Northern Firetrail Hand Tool 1	Recorders AGD	55	688400	6542188	Open site	Valid	Artefact : 1	Permits	
28-1-0033	Contact Northern Firetrail Artefact Scatter 1	Recorders AGD	55	688805	6542042	Open site	Valid	Artefact : 40	Permits	
28-1-0034	Contact Northern Firetrail Fig Tree 2	Recorders AGD	55	687680	6541862	Open site	Valid	Aboriginal Resource and Gathering : 1	Permits	
28-1-0035	Contact Northern Firetrail Fig Tree 1	Recorders AGD	55	688741	6542087	Open site	Valid	Aboriginal Resource and Gathering : 1	Permits	
28-1-0036	Contact Northern Fire Trail Ochre 1	Recorders AGD	55	688831	6542104	Open site	Valid	Aboriginal Resource and Gathering : 1	Permits	
28-1-0039	Contact Nemzie Burial 1	Recorders GDA	55	655214	6529860	Open site	Valid	Burial : 1	Permits	
28-1-0054	Contact Mt Terrace-LLS-OS2 (MT-LLS-OS2)	Recorders GDA	55	684939	6531553	Open site	Valid	Artefact : -	Permits	

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Extensive search - Site list report


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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
28-1-0055	Contact Mt Terrace-LLS-OS3 (MT-LLS-OS3)	Recorders GDA	55	684546	6531693	Open site	Valid	Artefact : - Potential Archaeological Deposit (PAD) : -	Permits	
28-1-0056	Contact Mt Terrace-LLS-OS1 (MT-LLS-OS1)	Recorders GDA	55	684878	6531224	Open site	Valid	Artefact : -	Permits	
28-1-0008	Contact Blackman's Mountain;	Recorders AGD	55	689500	6535000	Closed site	Valid	Artefact : -	Permits	Shelter with Deposit
28-1-0009	Contact Junction Mountain;	Recorders AGD	55	689800	6540000	Open site	Valid	Artefact : -	Permits	Open Camp Site
28-1-0010	Contact Camp WB1 Warrumbungle NP	Recorders AGD	55	687800	6537400	Open site	Valid	Artefact : -	Permits	Open Camp Site 1068
28-1-0011	Contact Warrumbungle Woolshed Sites WB2	Recorders AGD	55	686400	6538400	Open site	Valid	Artefact : -	Permits	Open Camp Site 1068
28-1-0012	Contact Burbie Creek WB3	Recorders AGD	55	687300	6537600	Open site	Valid	Artefact : -	Permits	Open Camp Site 1068
28-1-0013	Contact WB6 Warrumbungle NP	Recorders AGD	55	683300	6538100	Open site	Valid	Artefact : - Modified Tree (Carved or Scarred) : -	Permits	Open Camp Site, Scarred Tree 1068
28-1-0014	Contact Warrumbungle 7 Tenandra	Recorders AGD	55	684500	6525900	Open site	Valid	Artefact : -	Permits	Open Camp Site 1068
28-1-0015	Contact Burbie Camp WB9 Warrumbungle NP	Recorders AGD	55	686200	6535300	Open site	Valid	Artefact : -	Permits	Open Camp Site 1068
28-1-0016	Contact WB10 Barone Creek Warrumbungle NP	Recorders AGD	55	674500	6529500	Open site	Valid	Modified Tree (Carved or Scarred) : -	Permits	Scarred Tree 1068
28-1-0017	Contact Warrumbungle 13 Blackmans Mountain	Recorders AGD	55	689600	6536400	Closed site	Valid	Artefact : -	Permits	Shelter with Deposit 1068
28-1-0018	Contact Warrumbungles Warrumbungle NP	Recorders AGD	55	687300	6540600	Open site	Valid	Artefact : -	Permits	Open Camp Site 1068
28-1-0019	Contact Pincham 1;	Recorders AGD	55	690131	6535364	Open site	Valid	Artefact : -	Permits	Open Camp Site
	Contact W Turner	Recorders W Turner							Permits	

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
28-2-0010	Wambalong; Contact	AGD	55	690800	6536800	Open site	Valid	Artefact: - Permits	Open Camp Site	889
28-2-0030	Camp Canyon; Contact	AGD	55	689000	6537500	Open site	Valid	Artefact: - Permits	Open Camp Site	1759
27-2-0019	Marra Creek 7; Contact	AGD	55	651960	6528640	Open site	Valid	Modified Tree (Carved or Scarred): - Permits	Scarred Tree	
27-2-0021	Marra Creek 8; Contact	AGD	55	651870	6528700	Open site	Valid	Modified Tree (Carved or Scarred): - Permits	Scarred Tree	
27-2-0022	Marra Creek 9; Contact	AGD	55	651720	6528660	Open site	Valid	Modified Tree (Carved or Scarred): - Permits	Scarred Tree	
27-3-0010	Gulgambone Creek; Contact	AGD	55	641468	6533142	Open site	Valid	Modified Tree (Carved or Scarred): - Permits	Scarred Tree	4779
27-3-0013	Gulgambone Creek; Contact	AGD	55	641465	6533416	Open site	Valid	Modified Tree (Carved or Scarred): - Permits	Scarred Tree	4779
28-1-0004	Cherry Tree Contact	AGD	55	676700	6527600	Open site	Valid	Modified Tree (Carved or Scarred): - Burial: - Permits	Burial/s,Carved Tree	65
28-1-0005	The Gums Reserve,Armatree; Contact	AGD	55	648700	6523200	Open site	Valid	Modified Tree (Carved or Scarred): - Permits	Scarred Tree	
28-1-0006	Gulgambone Creek; Contact	AGD	55	657200	6529400	Open site	Valid	Artefact: - Permits	Open Camp Site	
28-1-0007	Burbie Gap Cave,Warrumbungle; Contact	AGD	55	687700	6537000	Closed site	Valid	Artefact: - Permits	Shelter with Deposit	1147
28-1-0094	NB-AS-02 Contact	GDA	55	674514	6565374	Open site	Valid	Artefact: - Permits		
		Recorders	Mr.Neville Baker,Sydney Water-Parramatta							

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AHIMS Web Services (AWS)

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
28-1-0095	NB-AS-04	GDA	55	675312	6563345	Open site	Valid	Artefact :-		
	Contact	Recorders	Mr.Neville Baker,Sydney Water-Parramatta							
28-1-0096	NB-AS-03	GDA	55	674435	6564814	Open site	Valid	Artefact :-		
	Contact	Recorders	Mr.Neville Baker,Sydney Water-Parramatta							
28-1-0092	NB-AS-06	GDA	55	680770	6561400	Open site	Valid	Artefact :-		
	Contact	Recorders	Mr.Neville Baker,Sydney Water-Parramatta							
28-1-0093	NB-AS-05	GDA	55	674090	6555720	Open site	Valid	Artefact :-		
	Contact	Recorders	Mr.Neville Baker,Sydney Water-Parramatta							
27-3-0007	Gulgambone Creek	AGD	55	641469	6533051	Open site	Valid	Modified Tree (Carved or Scarred) :-	Scarred Tree	4779
	Contact	Recorders	ASRSYS							
28-1-0003	Tara Caves Chalkers Mountain	AGD	55	686900	6538800	Closed site	Valid	Artefact :- Grinding Groove :-	Axe Grinding Groove,Shelter with Deposit	290
	Contact	Recorders	Sabu Dunn,Glen Morris							
28-1-0037	The Ponds Artefact Scatter 1	AGD	55	690262	6538644	Open site	Valid	Artefact : 5		
	Contact	Recorders	Mr.Mervyn Sutherland							
28-1-0046	Pincham Cave	GDA	55	690076	6535543	Closed site	Valid	Habitation Structure : 1. Artefact : 2		
	Contact	Recorders	Ms.J Norton							
28-1-0047	McEwan Cave	GDA	55	689720	6536460	Open site	Valid	Habitation Structure : 1. Artefact : 8		
	Contact	Recorders	Ms.J Norton							
28-1-0048	Woolshed Cave	GDA	55	686481	6539157	Open site	Valid	Grinding Groove : 1		
	Contact	Recorders	Ms.J Norton							
28-1-0049	Chalkers Cave 1	GDA	55	684884	6540933	Open site	Valid	Habitation Structure : 1. Artefact : 1		
	Contact	Recorders	Ms.J Norton							
28-1-0040	Melville HillST1	AGD	55	674236	6562929	Open site	Valid	Modified Tree (Carved or Scarred) : 1		103088
	Contact	Recorders	Mr.Patrick Gaynor							
28-1-0041	Mt Bullaway Artefact Scatter01	GDA	55	687643	6544614	Open site	Valid	Artefact :-		
	Contact	Recorders	Craig Wall							
28-1-0042	Mt Bullaway Artefact Scatter02	GDA	55	687857	6544332	Open site	Valid	Artefact :-		
	Contact	Recorders	Craig Wall							

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
28-1-0043	Mt Bullaway Artefact Scatter03	GDA	55	689977	6544165	Open site	Valid	Artefact :-		
	Contact	Recorders	Craig Wall						Permits	
28-1-0044	Mt Bullaway Artefact Scatter04	GDA	55	690328	6543709	Open site	Valid	Artefact :-		
	Contact	Recorders	Craig Wall						Permits	
28-1-0045	Mt Bullaway Artefact Scatter05	GDA	55	690521	6543549	Open site	Valid	Artefact :-		
	Contact	Recorders	Craig Wall						Permits	
28-2-0177	Mt Bullaway Artefact Scatter06	GDA	55	690649	6543537	Open site	Valid	Artefact :-		
	Contact	Recorders	Craig Wall						Permits	
28-2-0194	Everleigh-LLS-OS1 (EL-LLS-OS1)	GDA	55	690327	6519458	Open site	Valid	Artefact :- Potential Archaeological Deposit (PAD) :-		103810
	Contact	Recorders	OzArk Environmental and Heritage Management,Doctor,Chris Lovell						Permits	
28-1-0053	Everleigh-LLS-IF1 (EL-LLS-IF1)	GDA	55	690077	6519528	Open site	Valid	Artefact :- Grinding Groove :-		103810
	Contact	Recorders	OzArk Environmental and Heritage Management,Doctor,Chris Lovell						Permits	

Report generated by AHIMS Web Service on 21/10/2019 for Kirwan Williams for the following area at Datum :GDA, Zone : 55, Eastings : 641500 - 691500, Northings : 6518500 - 6568500 with a Buffer of 0 meters. Additional Info : To inform archaeological assessment. Number of Aboriginal sites and Aboriginal objects found is 103

This information is not guaranteed to be free from error omission. Office of Environment and Heritage (NSW) and its employees disclaim liability for any act done or omission made on the information and consequences of such act or omission.

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APPENDIX 2: ABORIGINAL HERITAGE: UNANTICIPATED FINDS PROTOCOL

An Aboriginal artefact is anything which is the result of past Aboriginal activity. This includes stone (artefacts, rock engravings etc.), plant (culturally scarred trees) and animal (if showing signs of modification; i.e. smoothing, use). Human bone (skeletal) remains may also be uncovered while onsite.

Cultural heritage significance is assessed by the Aboriginal community and is typically based on traditional and contemporary lore, spiritual values, and oral history, and may also take into account scientific and educational value.

Protocol to be followed in the event that previously unrecorded or unanticipated Aboriginal object(s) are encountered:

1. If any Aboriginal object is discovered and/or harmed in, or under the land, while undertaking the proposed development activities, the proponent must:
 - a. Not further harm the object;
 - b. Immediately cease all work at the particular location;
 - c. Secure the area so as to avoid further harm to the Aboriginal object;
 - d. Notify Biodiversity and Conservation Division (BCD) as soon as practical on 131 555, providing any details of the Aboriginal object and its location; and
 - e. Not recommence any work at the particular location unless authorised in writing by BCD.
2. In the event that Aboriginal burials are unexpectedly encountered during the activity, work must stop immediately, the area secured to prevent unauthorised access and NSW Police and BCD contacted.
3. Cooperate with the appropriate authorities and relevant Aboriginal community representatives to facilitate:
 - a. The recording and assessment of the find(s);
 - b. The fulfilment of any legal constraints arising from the find(s), including complying with BCD directions; and
 - c. The development and implementation of appropriate management strategies, including consultation with stakeholders and the assessment of the significance of the find(s).
4. Where the find(s) are determined to be Aboriginal object(s), recommencement of work in the area of the find(s) can only occur in accordance with any consequential legal requirements and after gaining written approval from BCD (normally an Aboriginal Heritage Impact Permit).

APPENDIX 3: ABORIGINAL HERITAGE: ARTEFACT IDENTIFICATION

	
Retouched blades (scale = 1cm)	Flakes
	
Microliths (scale = 1cm)	Scraper (scale = 1cm)
	
Flake characteristics (scale = 1cm)	Core from which flakes have been removed (scale = 1cm)

APPENDIX 4: HISTORIC HERITAGE: UNANTICIPATED FINDS PROTOCOL

A historic artefact is anything which is the result of past activity not related to the Aboriginal occupation of the area. This includes pottery, wood, glass and metal objects as well as the built remains of structures, sometimes heavily ruined.

Heritage significance of historic items is assessed by suitably qualified specialists who place the item or site in context and determine its role in aiding the community's understanding of the local area, or their wider role in being an exemplar of state or even national historic themes.

The following protocol should be followed if previously unrecorded or unanticipated historic objects are encountered:

1. All ground surface disturbance in the area of the finds should cease immediately, then:
 - a) The discoverer of the find(s) will notify machinery operators in the immediate vicinity of the find(s) so that work can be halted
 - b) The site supervisor will be informed of the find(s).
2. If finds are suspected to be human skeletal remains, then NSW Police must be contacted as a matter of priority.
3. If there is substantial doubt regarding the historic significance for the finds, then gain a qualified opinion from an archaeologist as soon as possible. This can circumvent proceeding further along the protocol for items which turn out not to be significant. If a quick opinion cannot be gained, or the identification is that the item is likely to be significant, then proceed to the next step.
4. Notify the Heritage Division as soon as practical on 131 555 providing any details of the historic find and its location.
5. If in the view of the heritage specialist or the Heritage Division that the finds appear not to be significant, work may recommence without further investigation. Keep a copy of all correspondence for future reference.
6. If in the view of the heritage specialist or the Heritage Division that the finds appear to be significant, facilitate the recording and assessment of the finds by a suitably qualified heritage specialist. Such a study should include the development of appropriate management strategies.
7. If the find(s) are determined to be significant historic items (i.e. of local or state significance), any re-commencement of ground surface disturbance may only resume following compliance with any legal requirements and gaining written approval from the Heritage Division.